Bristol Bay (Area T) King Crab Test Fishery, 1988

Trip Report Summary

By

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Regional Information Report[1] No. 4K88-16

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211 Mission Road
Kodiak, Alaska 99615

February 1988

[1]The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc information purposes or archive basic uninterrupted data. To accommodate needs for up-to-date information, reports in this series may contain preliminary data.

OBJECTIVES

To determine under a controlled manner, the Catch Per Unit Effort of a post season limited fishery, and to determine the frequency of damaged crab and sorting rates, after completion of a regulated fishery. Additional objectives will be to determine the yield of meat recovered for crabs retained at this time of the year vs. yields in the September/October established season and to establish a carapace width vs. frozen merus length relationship.

ON BOARD PROCEDURES

The skipper conducted this test fishery in the same manner he would if he were commercial fishing during the regular established season. He fished commercially where he wanted based on his experience in Area T. Loran or lat/long coordinates of the end pots in each string and the number of pots in each string were recorded by the skipper and made available to the observer.

All male king crab 6" or greater in shell width were retained from the catch and live tanked until sale by ADF&G. Crew members were instructed to make sure that shell widths were at least 6" including the spines before retaining the crab.

All other crabs were returned to the sea unharmed as soon as possible or after appropriate measurements were obtained.

The observers recorded numbers of crabs caught in each pot by size and sex. The number of legal males (6" or greater), sublegal males and females per pot were kept. These data were recorded on the shipboard sampling form.

Sampling crab took place every 5th pot pulled. When time permitted more pots were sampled. The rate of subsampling remained the same for any given 24 hour period. When a pot was chosen to sample the observer retained its entire contents and sampled. Each crab was measured for length or width, sexed, and shell aged with the data recorded on the Crab Data Form. Any damage such as a cracked carapace, missing or regenerated appendages, new or old was recorded in the damaged parts column of the form and coded appropriately.

Examples of shell aging, shell measurements, leg regenerations, etc. were demonstrated to the inexperienced observers by the crew leader on each vessel in case the techniques were foreign.

Upon delivery of the crabs to the processing plant 150 crab were measured for shell width vs. frozen merus length relationships. The size of these animals covered both crabs above and below 6 1/2" in carapace width. The merus from the second walking leg of each crab was attached with a electrical tie containing a peterson disk tag. Each disc was individually numbered and the

number corresponded to the shell width of that crab. After cooking and freezing of the crab the merus was measured and recorded adjacent to the shell width.

The processing plant that purchased the crab provided the ADF&G with the data on meat yield from their samples.

RESULTS

Two vessels were chartered to fish for crab between December 30, 1987 and January 11, 1988. Each vessel fished approximately 100 king crab pots that were allowed to soak 24-48 hours. 805 pots were pulled for both vessels and 9 Bristol Bay statistical areas were fished.

King crab delivered to Alyeska Seafoods in Dutch Harbor totaled 3,343. This includes 1,785 crab that were found in 22 lost pots. Catch per unit effort for our survey pots was only 1.9 crab/pot. CPUE for the 22 lost pots was 81 crab/pot. Average weight per crab was 4.86 pounds for a total weight delivered of 16,240 pounds.

The vessels began fishing in the areas where they had been catching crab during the September/October season. After two days it became apparent that the crab had moved and the remaining time was spent moving gear each day looking for the school crab. The catches in the lost pots indicated that the crab were heavily concentrated in the area during September/October.

Fishing took place as shallow as 31 fathoms and as deep as 63 fathoms. Gear was moved over vast areas using the skippers experience to locate crab. We never found any concentration of legal male king crab although we did locate areas of female crab. The majority of the crabs caught were at depths of about 40 fathoms.

Preliminary results from the study indicate that damaged crab are not encountered to a high degree. The damage that was observed was generally old injuries of missing or regenerated legs.

Yield of cooked section weight per live weight for the January test fishery was 64.57%. This compares to 63.2% for the September/October deliveries.

Merus length vs. shell width data was taken upon delivery of the crabs. A report containing the data will be available in a separate report.

The weather was poor for most of the fishery. Winds of up to 60 knots and 20+ foot seas were encountered. Fishing was not interrupted due to weather. The fishing crew were extremely helpful in sorting crab while the biological crew were busy sampling. Fishing continued up to 20 hours per day and traveling constantly trying to locate crab was very frustrating.

Fishing for king crab in January is a hit or miss operation at best. And even though two vessels were fishing different areas each day we still missed. Skippers also claim full moon and big tides at the beginning of the month played a role in our poor catch.